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ACTOR	
name	gender
fred	male
ginger	female
bing	male

MOVIE	
name	genre
m1	drama
m2	comedy

ROLE			
role	movie	actor	role-type
r1	m1	fred	hero
r2	m1	ginger	heroine
r3	m1	bing	villain
r4	m2	bing	hero
r5	m2	ginger	love-interest

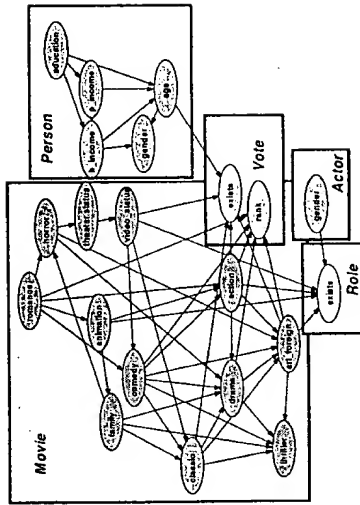
Figure 1:

[illegible]

Fig. 2

The diagram illustrates the relationships between three entities: Person, Company, and Role. The Person entity (left) has attributes: age, retired, salary, and top\_role. The Company entity (top) has attributes: total\_assets, employees, rtn\_earn\_assets, and total\_assets. The Role entity (bottom right) has attributes: retired, salary, and top\_role. Arrows indicate relationships: age points to retired; total\_assets points to retired; employees points to salary; rtn\_earn\_assets points to top\_role; total\_assets points to top\_role; and salary points to top\_role. Dashed lines indicate that the Role entity is a specialization of the Person entity.

Fig. 3



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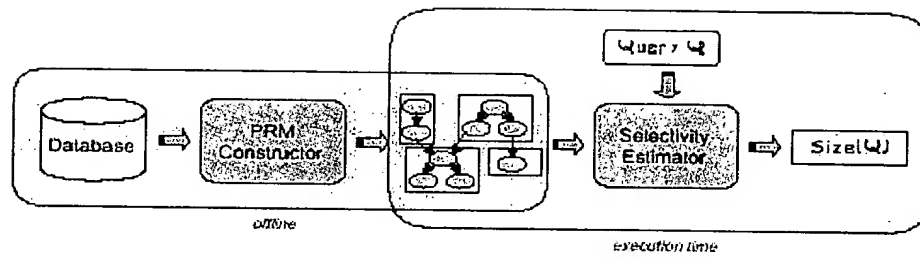


Figure 5

E	I	H	$P(E, I, H)$
h	l	f	0.27
h	l	t	0.03
h	m	f	0.105
h	m	t	0.045
h	h	f	0.005
h	h	t	0.045
c	l	f	0.135
c	l	t	0.015
c	m	f	0.063
c	m	t	0.027
c	h	f	0.006
c	h	t	0.054
a	l	f	0.018
a	l	t	0.002
a	m	f	0.042
a	m	t	0.018
a	h	f	0.012
a	h	t	0.108

Fig. 4(a)

E	$P(E)$
h	0.5
c	0.3
a	0.2

I	E	$P(I E)$
l	h	0.6
m	h	0.3
h	h	0.1
l	c	0.5
m	c	0.3
h	c	0.2
l	a	0.1
m	a	0.3
h	a	0.6

Fig. 4(b)

H	I	$P(H I)$
t	l	0.1
f	l	0.9
t	m	0.3
f	m	0.7
t	h	0.9
f	h	0.1

E	$P(E)$
h	0.5
c	0.3
a	0.2

I	$P(I)$
l	0.47
m	0.30
h	0.23

H	$P(H)$
t	0.344
f	0.656

Fig. 4(c)

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graph LR
    Sex([Sex]) --> Industry([Industry])
    Sex --> Education([Education])
    Sex --> EmploymentType([Employment Type])
    Sex --> ChildSupport([ChildSupport])
    Sex --> MeritalStatus([MeritalStatus])
    Age([Age]) --> Industry
    Age --> Education
    Age --> EmploymentType
    Age --> ChildSupport
    Age --> MeritalStatus
    Race([Race]) --> WorkerClass([WorkerClass])
    Race --> Earned([Earned])
    Industry --> Education
    Industry --> Earned
    Education --> EmploymentType
    Education --> Earned
    EmploymentType --> Earned
    EmploymentType --> Income([Income])
    EmploymentType --> ChildSupport
    EmploymentType --> MeritalStatus
    WorkerClass --> Earned
    Earned --> Income
    Income --> ChildSupport
    ChildSupport --> MeritalStatus
    MeritalStatus --> Children([Children])
  
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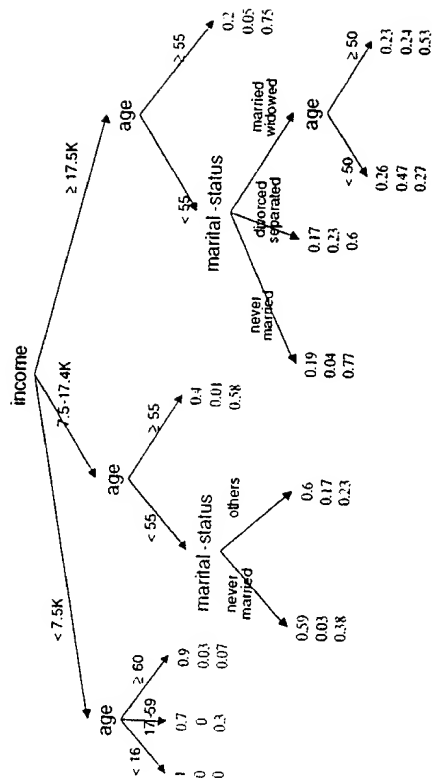


Fig. 7(a)

Fig. 7(b)

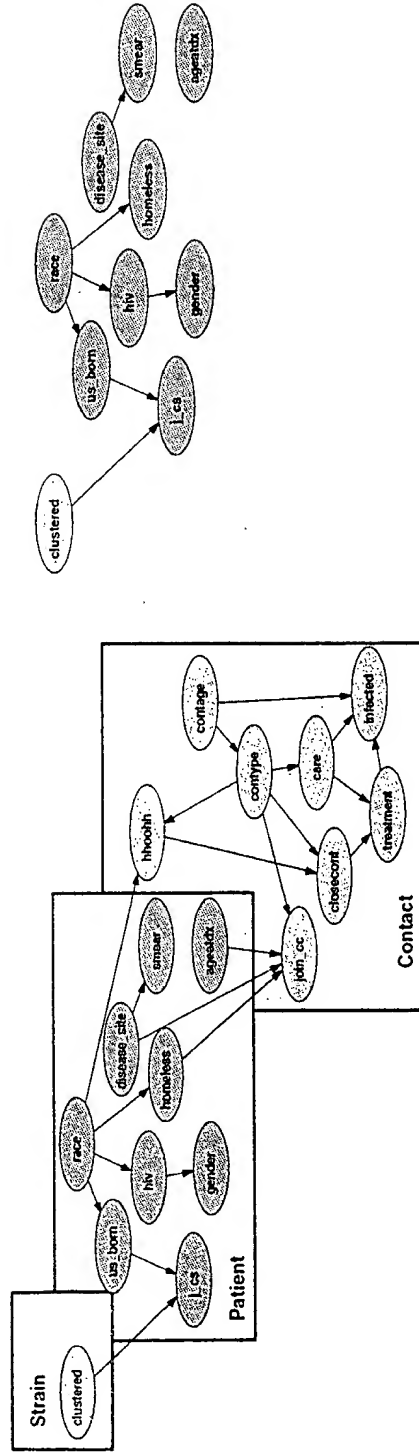


Fig. 8 (a)

Fig. 8 (b)



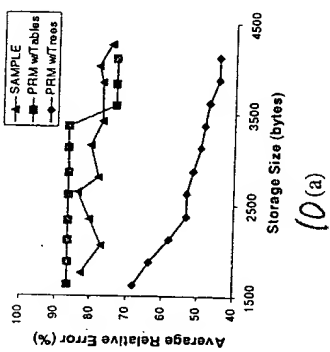
Figure 10 is a line graph showing the Average Relative Error (%) on the Y-axis (ranging from 0 to 1400) versus Storage Size (bytes) on the X-axis (ranging from 200 to 1200). Three methods are compared: MHIST (squares), SAMPLE (triangles), and PRM (diamonds). All methods show a sharp decrease in error as storage size increases, with MHIST consistently having the highest error and PRM the lowest.

Storage Size (bytes)	MHIST (%)	SAMPLE (%)	PRM (%)
200	1250	100	550
400	380	100	180
600	250	100	100
800	200	100	50
1000	180	100	50

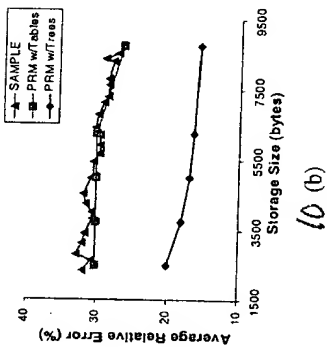
Storage Size (bytes)	MHST (%)	SAMPLE (%)	PRM (%)
500	450	100	80
1000	480	80	40
1500	520	90	80
2000	530	70	40
2500	540	70	40
3000	540	70	40
3500	540	70	40

Storage Size (bytes)	M-HIST (%)	SAMPLE (%)	PRM (%)
500	54	24	24
1500	60	19	12
2500	61	20	11
3500	62	19	10
4500	62	19	9
5500	62	19	9

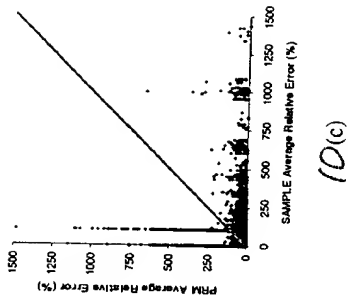
9(c)



10 (a)



10 (b)



10 (c)

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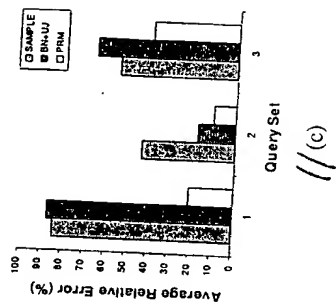
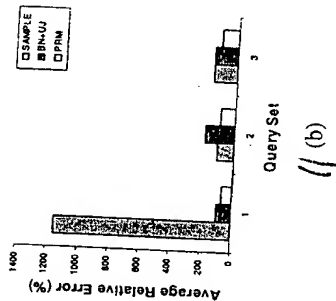
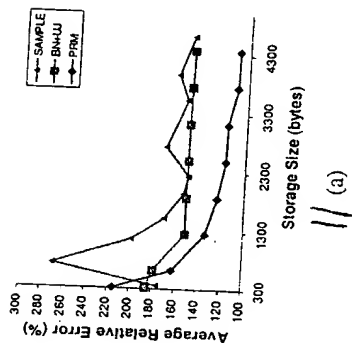


Figure 12(a) is a line graph showing Running Time (secs) on the Y-axis versus Storage Size (bytes) on the X-axis. The Y-axis ranges from 0 to 2500 in increments of 500. The X-axis ranges from 0 to 8500 in increments of 500. Two data series are plotted: Tapes (represented by triangles) and Tubes (represented by squares). The Tapes series shows a linear increase in running time as storage size increases, starting at approximately 100 seconds for 0 bytes and reaching about 2000 seconds for 8500 bytes. The Tubes series remains consistently near zero running time across all storage sizes.

Storage Size (bytes)	Tapes Running Time (secs)	Tubes Running Time (secs)
0	~100	~0
500	~200	~0
1000	~300	~0
1500	~400	~0
2000	~500	~0
2500	~600	~0
3000	~700	~0
3500	~800	~0
4000	~900	~0
4500	~1000	~0
5000	~1100	~0
5500	~1200	~0
6000	~1300	~0
6500	~1400	~0
7000	~1500	~0
7500	~1600	~0
8000	~1700	~0
8500	~1800	~0

